

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
21 July 2005 (21.07.2005)

PCT

(10) International Publication Number  
**WO 2005/066338 A1**

(51) International Patent Classification<sup>7</sup>: C12N 9/30, 15/56

(74) Common Representative: NOVOZYMES A/S;  
Krogshøjvej 36, DK-2880 Bagsværd (DK).

(21) International Application Number:  
PCT/DK2004/000896

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date:  
22 December 2004 (22.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
PA 2004 00021 8 January 2004 (08.01.2004) DK

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant (*for all designated States except US*):  
NOVOZYMES A/S [DK/DK]; Krogshøjvej 36, DK-2880 Bagsværd (DK).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): LIU, YE [CN/CN]; 14, Zizhuyuan Lu, Hai Dian Distric, Beijing 100044 (CN). TANG, Lan [CN/CN]; ZhiChun Road 57-1-707, Hai Dian District, Beijing 100080 (CN). SPENDLER, Tina [DK/DK]; Myrholmen 52, DK-2760 Måløv (DK). STRINGER, Mary, Ann [US/DK]; Søborg Hovedgade 39C, 3tv, DK-2860 Søborg (DK).

**Published:**

— with international search report

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: AMYLASE

(57) Abstract: The inventors have identified amylases in fungal strains of Valsaria and found that the amylase can increase the shelf life of baked products. Particularly, the novel amylase in combination with a maltogenic amylase further improves the softness of bread crumb without having detrimental effects on elasticity.



WO 2005/066338 A1